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EXAMINER	
LAMBRECHT, CHRISTOPHER M	
ART UNIT	**PAPER NUMBER**
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/698,992	SADANAKA ET AL.	
	Examiner	Art Unit	
	Christopher M. Lambrecht	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-76 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-76 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/2/2003.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4-7, 12-21, 32-41, and 51-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art at pages 2-6 of the instant application (hereinafter "APA") in view of European Patent Application Publication No. EP0682430 (supplied by Applicant in the IDS filed 2 September 2003, hereinafter "Kawakami").

Regarding claims 1, 21, and 41, APA discloses a system, means, and corresponding method for using a plurality of transmission lines of a digital bus (IEEE-1394, p. 2, ¶4) having a plurality of transmission lines and capable of selecting any connection mode from among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1),

said plurality of electronic apparatus connected to said bus are classified into a first receiving apparatus that receives the data mainly through a transmission line of said first connection mode and a

second receiving apparatus that receives the data mainly through a transmission line of said second connection mode (pp. 5-6).

APA fails to disclose some of said plurality of transmission lines are secured for said first connection mode and the residual transmission lines other than transmission lines secured for said first connection mode out of said plurality of transmission lines are allocated to the second connection mode.

In an analogous art, Kawakami discloses some of said plurality of transmission lines are secured for said first connection mode (broadcast, col. 16, ll. 24-32) and the residual transmission lines other than transmission lines secured for said first connection mode out of said plurality of transmission lines are allocated to the second connection mode (where there are two connection type, and some channels are reserved for a first type, the remaining channels are inherently allocated to said second type), for the purpose of providing a more user-friendly system (col. 17, ll. 38-46).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system described in APA to include some of said plurality of transmission lines are secured for said first connection mode and the residual transmission lines other than transmission lines secured for said first connection mode out of said plurality of transmission lines are allocated to the second connection mode, as taught by Kawakami, for the purpose of providing a more user-friendly system.

Regarding claim 4, APA discloses means for and corresponding method for using a plurality of transmission lines of a digital bus (IEEE-1394, p. 2, ¶4) having a plurality of transmission lines and capable of selecting any connection mode from among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1),

said plurality of electronic apparatus connected to said bus are classified into a first receiving apparatus that receives the data mainly through a transmission line of said first connection mode and a second receiving apparatus that receives the data mainly through a transmission line of said second connection mode (pp. 5-6).

APA fails to disclose a transmission line of said first connection mode is allocated to each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode one-to-one correspondingly.

In an analogous art, Kawakami discloses a transmission line of said first connection mode is allocated to each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode (broadcast, col. 16, ll. 24-32) one-to-one correspondingly (where the system comprises a single receiver, col. 15, ll. 22-26, and a single broadcast channel is allocated, col. 15, ll. 31-37) , for the purpose of providing a more user-friendly system (col. 17, ll. 38-46).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system described in APA to include a transmission line of said first connection mode is allocated to each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode one-to-one correspondingly, as taught by Kawakami, for the purpose of providing a more user-friendly system.

Regarding claim 5, APA and Kawakami together disclose a transmission line using method as claimed in claim 4. In addition, Kawakami discloses wherein:

a transmission line of said first connection mode is previously set to each said first receiving apparatus (broadcast channel, col. 16, ll. 24-32), and

a transmission line different from said previously set transmission line is allocated to said first transmission apparatus when the data that said first receiving apparatus cannot process is found on the previous set transmission line of said first receiving apparatus (col. 23, l. 56 - col. 24, l. 1).

Regarding claim 6, APA and Kawakami together disclose a transmission line using method as claimed in claim 4, In addition, Kawakami discloses wherein, when the transmission line that is to be allocated to said first receiving apparatus is exclusively occupied by another apparatus, the transmission line that is to be allocated to said first receiving apparatus is changed (col. 23, l. 56 - col. 24, l. 8).

Regarding claim 7, APA and Kawakami together disclose a transmission line using method as claimed in claim 6, In addition, Kawakami discloses wherein:

a transmission line of said first connection mode is previously set to each of said first receiving apparatus (broadcast channel, col. 16, ll. 24-32),

each setting information of said first receiving apparatus connected to said digital bus is referred (in the bus manager, col. 16, ll. 24-32), and

when the transmission line that is to be allocated to said first receiving apparatus has been already allocated to another electronic apparatus, the transmission line is regarded as exclusively occupied by another electronic apparatus, and the transmission line that is to be allocated to the first receiving apparatus is changed (col. 23, l. 56 - col. 24, l. 8).

Regarding claims 12 and 32, APA and Kawakami together disclose a system as claimed in claims 1 and 21, wherein said second receiving apparatus receives supply of the data from a target electronic apparatus connected to said digital bus, forms a transmission line of said second connection mode avoiding the transmission line that has been secured as the transmission line of said first connection mode, and receives supply of data through the formed transmission line (Kawakami, col. 13, ll. 36-52 and col. 23, l. 56 - col. 24, l. 1), and

said second receiving apparatus, when said second receiving apparatus receives supply of the data transmitted through the transmission line of said first connection mode of said digital bus, forms a transmission line of said first connection mode used for transmission of the data, and receives supply of the data (Kawakami, col. 16, ll. 24-33).

Regarding claims 13 and 33, APA and Kawakami together disclose a system as claimed in claims 12 and 32, wherein, when said second receiving apparatus is to receive supply of the data, that is being transmitted through the transmission line of said first connection mode (Kawakami, col. 17, ll. 5-15), then through a transmission line of said second connection mode, said second receiving apparatus specifies the sender of the data transmitted through the transmission line of said first connection mode as said target electronic apparatus that supplies the data to this apparatus, and forms a transmission line of said second connection mode between said second receiving apparatus and the specified electronic apparatus (col. 12, ll. 4-28).

Regarding claims 14 and 34, APA and Kawakami together disclose a system as recited in claims 12 and 32. In addition, Kawakami discloses said second receiving apparatus is to receive supply of the data from the target electronic apparatus, said second receiving apparatus accepts a selection input entered by a user to select a sender electronic apparatus connected to said digital bus (col. 10, ll. 14-21), specifies

said target electronic apparatus that supplies the date to this apparatus correspondingly to said selection input (col. 8, ll. 25-28), and forms a transmission line of said second connection mode between said second receiving apparatus and the specified electronic apparatus (col. 11, ll. 22-25).

Regarding claims 15 and 35, APA and Kawakami together disclose a system as claimed in claims 1 and 21. In addition, Kawakami discloses a sending out apparatus that is an electronic apparatus for sending out the data to said digital bus is capable of sending out the data through both a transmission line connected in said first connection mode and a transmission line in said second connection mode (col. 11, ll. 15-25).

Regarding claims 16 and 36, APA and Kawakami together disclose a system as claimed in claims 1 and 35. In addition, Kawakami discloses a sending out apparatus that is an electronic apparatus for sending out the data to said digital bus is connected to a secured transmission line of said first connection mode and sends out the data when an instruction input entered by a user instructing that the data is sent out to a transmission line connected in said first connection mode is accepted (col. 16, ll. 7-9 and ll. 24-32).

Regarding claims 17 and 37, APA and Kawakami together disclose a system as claimed in claims 1 and 21. In addition, Kawakami discloses an electronic apparatus connected to said digital bus changes a secured transmission line of said first mode when the necessity for changing said secured transmission line of said first connection mode (col. 10, ll. 14-21).

Regarding claims 18 and 38, APA and Kawakami together disclose a system as claimed in claims 17 and 37. In addition, Kawakami discloses an electronic apparatus connected to said digital bus changes

a secured transmission line of said first connection mode when sending out of the data that cannot be processed by mean of said first receiving apparatus to said secured transmission line of said first connection mode is detected (col. 23, l. 56 - col. 24, l. 1).

Regarding claims 19 and 39, APA and Kawakami together disclose a system as claimed in claims 17 and 37. In addition, Kawakami discloses an apparatus connected to said digital bus changes a transmission line of said first connection mode secured for said first receiving apparatus when the change of secured transmission line of said first connection mode is instructed by a user (col. 10, ll. 14-21).

Regarding claims 20, 40, and 60, APA and Kawakami together disclose a system as claimed in claims 1, 21, and 41. In addition, Kawakami discloses said digital bus is the IEEE 1394 standard digital serial interface (col. 5, ll. 21-28).

Regarding claim 51, APA discloses a system, means, and corresponding method for using a plurality of transmission lines of a digital bus (IEEE-1394, p. 2, ¶4) having a plurality of transmission lines and capable of selecting any connection mode from among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1).

APA fails to disclose an electronic apparatus bus comprises: second detection means for detecting the necessity to change a transmission line secured for said first receiving apparatus, and transmission line changing means for changing the transmission line of said first connection mode secured for said first receiving apparatus when said second detection means detects the necessity to change the transmission line secured for said first receiving apparatus.

In an analogous art, Kawakami discloses an electronic apparatus bus comprises: second detection means for detecting the necessity to change a transmission line secured for said first receiving apparatus, and transmission line changing means for changing the transmission line of said first connection mode secured for said first receiving apparatus when said second detection means detects the necessity to change the transmission line secured for said first receiving apparatus (col. 10, ll. 14-21), for the purpose of protecting an isochronous transmission between a plurality of devices (col. 11, ll. 15-21).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA to include an electronic apparatus bus comprises: second detection means for detecting the necessity to change a transmission line secured for said first receiving apparatus, and transmission line changing means for changing the transmission line of said first connection mode secured for said first receiving apparatus when said second detection means detects the necessity to change the transmission line secured for said first receiving apparatus, as taught by Kawakami, for the purpose of protecting an isochronous transmission between a plurality of devices.

Regarding claim 52, APA and Kawakami together disclose the system as claimed in claim 51. In addition, Kawakami discloses wherein said detection means detects the necessity to change the transmission line secured for said first receiving apparatus when the data that cannot be processed by mean of said first receiving apparatus is being sent to the transmission line secured for said first receiving apparatus (col. 23, l. 56 - col. 24, l. 1).

Regarding claim 53, APA and Kawakami together disclose the system as claimed in claim 51. In addition, Kawakami discloses there is provided change input means for accepting a change instruction input entered by a user for changing the transmission line, and said detection means detects the necessity to change the transmission line secured for said first receiving apparatus when a change instruction input is accepted through said changing instruction input accepting means (col. 10, ll. 14-21).

Regarding claim 54, APA and Kawakami together disclose the system as claimed in claim 41. In addition, Kawakami discloses said electronic apparatus is a predetermined apparatus out of the electronic apparatus connected to said digital bus (bus manager, col. 16, ll. 24-32).

Regarding claim 55, APA discloses an electronic apparatus connected to a digital bus (IEEE-1394, p. 2, ¶4) having a plurality of transmission lines and capable of selecting any connection mode from among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1).

APA fails to disclose said apparatus receives data mainly through a transmission line connected in said second connection mode, and wherein: said electronic apparatus comprises transmission line forming means for forming a transmission line of said second connection mode avoiding the transmission

line that has been secured as the transmission line of said first connection mode when said second receiving apparatus receives supply of the data from a target electronic apparatus connected to said digital bus; and connection means for connecting to a transmission line of said first connection mode used for transmission of the data when said second receiving apparatus receives supply of the data transmitted through the transmission line of said first connection mode of said digital bus.

In an analogous art, Kawakami discloses said apparatus receives data mainly through a transmission line connected in said second connection mode (col. 11, ll. 15-21), and wherein: said electronic apparatus comprises transmission line forming means for forming a transmission line of said second connection mode avoiding the transmission line that has been secured as the transmission line of said first connection mode when said second receiving apparatus receives supply of the data from a target electronic apparatus connected to said digital bus (col. 23, l. 56 - col. 24, l. 1); and connection means for connecting to a transmission line of said first connection mode used for transmission of the data when said second receiving apparatus receives supply of the data transmitted through the transmission line of said first connection mode of said digital bus (col. 16, ll. 24-32), for the purpose of enabling uninterruptible isochronous transmission between a plurality of nodes while creating a more user friendly system (col. 14, ll. 50-58 and col. 17, ll. 38-46).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA to include said apparatus receives data mainly through a transmission line connected in said second connection mode, and wherein: said electronic apparatus comprises transmission line forming means for forming a transmission line of said second connection mode avoiding the transmission line that has been secured as the transmission line of said first connection mode when said second receiving apparatus receives supply of the data from a target electronic apparatus connected to said digital bus; and connection means for connecting to a transmission line of said first connection mode used for transmission of the data when said second receiving apparatus receives supply

of the data transmitted through the transmission line of said first connection mode of said digital bus, as taught by Kawakami, for the purpose of enabling uninterruptible isochronous transmission between a plurality of nodes while creating a more user friendly system.

Regarding claim 56, APA and Kawakami together disclose the system as claimed in claim 55. In addition, Kawakami discloses said electronic apparatus comprises transmission apparatus specifying means for specifying the sender of the data transmitted through the transmission line of said first connection mode as said target electronic apparatus that supplies the data to this apparatus when this apparatus is to receive supply of the data that is being transmitted through the transmission line of said first connection mode through a transmission line of said second connection mode (col. 23, l. 44 - col. 24, l. 20), and said transmission line forming means forms a transmission line of said second connection mode between this apparatus and the specified electronic apparatus (col. 23, l. 56 - col. 24, l. 1).

Regarding claim 57, APA and Kawakami together disclose the system as claimed in claim 55. In addition, Kawakami discloses said electronic apparatus comprises apparatus selection input accepting means for accepting a selection input entered by a user to select an sender electronic apparatus from among said plurality of electronic apparatus connected to said digital bus when this apparatus is to receive supply of the data from the target electronic apparatus (col. 6, ll. 31-35); and

said transmission line forming means forms a transmission line of said second connection mode between this apparatus and the electronic apparatus instructed according to the apparatus selection input accepted by means of said apparatus selection input accepting means (col. 10, ll. 14-21).

Regarding claim 58, APA discloses an electronic apparatus connected to a digital bus (IEEE-1394, p. 2, ¶4) having a plurality of transmission lines and capable of selecting any connection mode from

among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines and that operates as a sending out apparatus for sending out the data to said digital bus, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1).

APA fails to disclose said sending out apparatus comprises data sending out means that is capable of sending out the data through both a transmission line connected in said first connection mode and a transmission line connected in said second connection mode.

In an analogous art, Kawakami discloses said sending out apparatus comprises data sending out means that is capable of sending out the data through both a transmission line connected in said first connection mode and a transmission line connected in said second connection mode (col. 11, ll. 15-25), for the purpose of enabling the selection of uninterruptible isochronous transmission of data between a plurality of devices (col. 14, ll. 50-58).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA to include said sending out apparatus comprises data sending out means that is capable of sending out the data through both a transmission line connected in said first connection mode and a transmission line connected in said second connection mode, as taught by Kawakami, for the purpose of enabling the selection of uninterruptible isochronous transmission of data between a plurality of devices.

Regarding claim 59, APA and Kawakami together disclose the system as claimed in claim 58. In addition, Kawakami discloses there is provided instruction input accepting means for accepting an instruction input entered by a user to instruct that the data is sent out to a transmission line connected in said first connection mode (col. 11, ll. 22-25).

Regarding claims 61 and 69, APA discloses an electronic apparatus and corresponding method coupled to a digital bus (IEEE-1394, p. 2, ¶4) capable of using both the first connection mode in which the data sent out newly to said digital bus is always allowed to be transmitted and a transmission line that transmits said data newly sent out is formed so as to be acceptable for all the electronic apparatus connected to said digital bus (p. 3, ¶2), and the second connection mode in which the data is transmitted between only two predetermined electronic apparatus and the data that is transmitted from other electronic apparatus to said digital bus is not accepted (p. 5, ¶1).

APA fails to disclose wherein said electronic apparatus comprises:

connection mode instruction means for accepting and holding an instruction input to instruct which connection mode out of said first connection mode and said second connection mode is used for forming a transmission line between electronic apparatus for communicating the data; and

connection control means for controlling to form a transmission line for the data between said electronic apparatus for communicating the data in the connection mode corresponding to said instruction input held in said connection mode instruction means.

In an analogous art, Kawakami discloses connection mode instruction means for accepting and holding an instruction input to instruct which connection mode out of said first connection mode and said second connection mode is used for forming a transmission line between electronic apparatus for communicating the data (col. 10, ll. 14-21 and col. 11, ll. 15-25); and

connection control means for controlling to form a transmission line for the data between said electronic apparatus for communicating the data in the connection mode corresponding to said instruction input held in said connection mode instruction means (col. 9, ll. 43-47), for the purpose of enabling the selection of uninterruptible isochronous transmission of data between a plurality of devices (col. 14, ll. 50-58).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA to include connection mode instruction means for accepting and holding an instruction input to instruct which connection mode out of said first connection mode and said second connection mode is used for forming a transmission line between electronic apparatus for communicating the data; and connection control means for controlling to form a transmission line for the data between said electronic apparatus for communicating the data in the connection mode corresponding to said instruction input held in said connection mode instruction means, as taught by Kawakami, for the purpose of enabling the selection of uninterruptible isochronous transmission of data between a plurality of devices.

Regarding claims 62 and 70, APA and Kawakami together disclose an electronic apparatus and method as claimed in claims 61 and 69. In addition, Kawakami discloses connection apparatus recognition means (bus manager, col. 7, ll. 6-10) for inquiring of each electronic apparatus connected to said digital bus to thereby recognize these electronic apparatus (col. 8, ll. 29-36), and connection mode setting notifying means for notifying that the connection mode is set to the target electronic apparatus as required when the connection mode of the transmission line formed between electronic apparatus recognized by means of said connection apparatus recognition means (col. 23, l. 44 - col. 24, l. 28).

Regarding claims 63 and 71, APA and Kawakami together disclose an electronic apparatus and corresponding method as claimed in claims 62 and 70. In addition, Kawakami discloses said electronic apparatus comprises connection state notifying means for notifying the connection state between all the electronic apparatus connected to said digital bus based on the electronic apparatus recognized by means of said connection apparatus recognition means (col. 20, l. 35 - col. 21, l. 15).

Regarding claims 64 and 72, APA and Kawakami together disclose an electronic apparatus and corresponding method as claimed in claims 62 and 70. In addition, Kawakami discloses connection mode detection means for inquiring of the electronic apparatus connected to said digital bus to thereby detect the electronic apparatus that has formed a transmission line currently and the connection mode of the transmission line; and

connection mode notifying means for notifying the detection result supplied from said connection mode detection means (col. 20, ll. 4-19).

Regarding claims 65 and 73, APA and Kawakami together disclose an electronic apparatus and corresponding method as claimed in claims 62 and 70. In addition, Kawakami discloses a discrimination means for discriminating whether said connection apparatus recognition means recognizes all the electronic apparatus connected to said digital bus or not; and

means for controlling said connection apparatus recognition means so as to recognize the electronic apparatus and set the connection mode of the transmission line formed between the electronic apparatus connected to said digital bus if said discrimination means discriminates that not all the electronic apparatus connected to said digital bus are recognized (col. 7, ll. 6-10 and col. 8, ll. 29-36).

Regarding claims 66 and 74, APA and Kawakami together disclose the apparatus and corresponding method as claimed in claims 62 and 70. In addition, Kawakami discloses setting start instruction input accepting means for accepting a start instruction input entered by a user to set the connection mode; and

means for controlling said connection apparatus recognition means to recognize the electronic apparatus and so as to set the connection mode of the transmission line formed between the electronic apparatus connected to said digital bus when said setting start instruction input entered by a user is accepted through said setting start instruction setting means (col. 10, ll. 14-21 and col. 11, ll. 15-25).

Regarding claims 67 and 75, APA and Kawakami together disclose an electronic apparatus and corresponding method as claimed in claims 62 and 70. In addition, Kawakami discloses connection change detection means for detection the change when the connection between the electronic apparatus connected through said digital bus is changed; and

means for controlling said connection apparatus recognition means to recognize the electronic apparatus and so as to set the connection mode of the transmission line between the electronic apparatus connected to said digital bus when said connection change detection means detects the change of connection between the electronic apparatus connected through said bus (col. 19, ll. 7-50).

Regarding claims 68 and 76, APA and Kawakami together disclose an electronic apparatus and method as claimed in claims 61 and 70. In addition, Kawakami discloses a continuous storing memory (connection counter) for storing and holding the information to instruct the connection mode to be used always when a transmission line is formed between the predetermined electronic apparatus (22-33); and

means for writing the information that instructs the connection mode corresponding to the instruction input given by a user when the user instructs the information to be written in said continuous storing memory (col. 10, ll. 14-21).

3. Claims 2, 3, 8-11, 22-31, and 42-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA and Kawakami as applied to claim 1 above, and further in view of European Patent Application Publication No. EP0766428 to Fujimori et al. (supplied by Applicant in the IDS filed 2 September 2003, hereinafter "Fujimori").

Regarding claims 2, 22, and 42, APA and Kawakami together disclose a system as claimed in claims 1, 21, and 41. However, they fail to disclose a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus connected to said digital bus.

In an analogous art, Fujimori discloses a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus connected to said digital bus (p. 2, l. 59 - p. 3, l. 2), for the purpose of enabling isochronous data transmission to a plurality of nodes (p. 9, ll. 22-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA and Kawakami to include a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus connected to said digital bus, as taught by Fujimori, for the purpose of enabling isochronous data transmission to a plurality of nodes.

Regarding claims 3, 23, and 43, APA and Kawakami together disclose a system as claimed in claims 1, 21, and 41, but fail to disclose wherein in the case that said first receiving apparatus functions to receive the data through another transmission line while said first receiving apparatus is receiving the data through one transmission line, a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus obtained on the assumption that there is said first receiving apparatus on every receivable transmission line.

In analogous art, Fujimori discloses in the case that said first receiving apparatus functions to receive the data through another transmission line while said first receiving apparatus is receiving the data through one transmission line, a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus obtained on the assumption that there is said first receiving apparatus on every receivable transmission line (i.e., each node which may receive data binds an isochronous channel, p. 2, l. 59 - p. 3, l. 2), for the purpose of enabling isochronous data transmission to a plurality of nodes (p. 9, ll. 22-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA and Kawakami to include in the case that said first receiving apparatus functions to receive the data through another transmission line while said first receiving apparatus is receiving the data through one transmission line, a plurality of transmission lines are secured for said first connection mode correspondingly to the number of said first receiving apparatus obtained on the assumption that there is said first receiving apparatus on every receivable transmission line, as taught by Fujimori, for the purpose of enabling isochronous data transmission to a plurality of nodes.

Regarding claims 8, 28, and 48, APA and Kawakami together disclose a system as claimed in claims 1, 21, and 41, but fail to disclose an electronic apparatus which detects the necessity to classify the

electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line.

In an analogous art, Fujimori discloses an electronic apparatus (isochronous resource manager 7) which detects the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line (p. 9, ll. 31-38), for the purpose of enabling isochronous data transmission to a plurality of nodes (p. 9, ll. 22-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA and Kawakami to include an electronic apparatus which detects the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line, as taught by Fujimori, for the purpose of enabling isochronous data transmission to a plurality of nodes.

Regarding claims 9 and 29, APA, Kawakami, and Fujimori together disclose a system as claimed in claims 1 and 21, but fail to disclose a predetermined electronic apparatus out of the electronic apparatus connected to said digital bus classifies the electronic apparatus into said first receiving apparatus and said second receiving apparatus and secures the transmission line, and when said predetermined apparatus detects the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line, said predetermined electronic

apparatus performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line.

In an analogous art, Fujimori discloses a predetermined electronic apparatus (isochronous resource manager 7) out of the electronic apparatus connected to said digital bus classifies the electronic apparatus into said first receiving apparatus and said second receiving apparatus and secures the transmission line (p. 9, ll. 31-38), and when said predetermined apparatus detects the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line, said predetermined electronic apparatus performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line (upon bus reset, p. 9, ll. 37-38), for the purpose of enabling isochronous data transmission to a plurality of nodes (p. 9, ll. 22-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA and Kawakami to include a predetermined electronic apparatus out of the electronic apparatus connected to said digital bus classifies the electronic apparatus into said first receiving apparatus and said second receiving apparatus and secures the transmission line, and when said predetermined apparatus detects the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and the necessity to secure the transmission line, said predetermined electronic apparatus performs classification of the electronic apparatus into said first receiving apparatus and said second receiving apparatus and securing of the transmission line, as taught by Fujimori, for the purpose of enabling isochronous data transmission to a plurality of nodes upon bus reset.

Regarding claims 10, 30, and 49, APA, Kawakami, and Fujimori together disclose a system as claimed in claims 8, 28, and 49. In addition, Fujimori discloses the necessity to classify the electronic

apparatus into said first receiving apparatus and said second electronic apparatus and to secure the transmission line is recognized when attaching of an electronic apparatus to said digital bus or detaching of an electronic apparatus from said digital bus is detected (p. 11, ll. 25-31), and the electronic apparatus is classified into said first receiving apparatus and said second electronic apparatus and the transmission line is secured (p. 9, ll. 31-38).

Regarding claims 11, 31, and 50, APA, Kawakami, and Fujimori together disclose a system as claimed in claims 8, 28, and 48, wherein the necessity to classify the electronic apparatus into said first receiving apparatus and said second receiving apparatus and to secure the transmission line is recognized when an instruction is given by a user (i.e., bus reset forced by interruption of power supply to node, Kawakami, col. 10, l. 57 - col. 11, l. 8), and the electronic apparatus is classified into said first receiving apparatus and said second electronic apparatus and the transmission line is secured (Fujimori, p. 9, ll. 31-38).

Regarding claims 24 and 44, APA discloses an information transmission system formed by connecting a plurality of electronic apparatus to a digital bus having a plurality of transmission lines and capable of selecting any connection mode from among a first connection mode and a second connection mode to form a transmission line for each of said plurality of transmission lines, wherein:

in said first connection mode, a transmission line that transmits the data sent out from one electronic apparatus so as to be receivable for all other electronic apparatus connected to said digital bus is formed (p. 3, ¶2),

in said second connection mode, a transmission line that transmits the data between only the predetermined two electronic apparatus and does not accept the data transmitted from other electronic apparatus is formed (p. 5, ¶1),

said plurality of electronic apparatus connected to said bus are classified into a first receiving apparatus that receives the data mainly through a transmission line of said first connection mode and a second receiving apparatus that receives the data mainly through a transmission line of said second connection mode (pp. 5-6).

APA fails to disclose categorizing said electronic apparatus at a predetermined timing; and means for securing a transmission line of said first connection mode for each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode one-to-one correspondingly and allocating the transmission lines other than said transmission lines secured for said first connection mode out of said plurality of transmission lines.

In an analogous art, Kawakami discloses a transmission line of said first connection mode is allocated to each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode (broadcast, col. 16, ll. 24-32) one-to-one correspondingly (where the system comprises a single receiver, col. 15, ll. 22-26, and a single broadcast channel is allocated, col. 15, ll. 31-37), and allocating the transmission lines other than said transmission lines secured for said first connection mode out of said plurality of transmission lines (where there are two connection type, and some channels are reserved for a first type, the remaining channels are inherently allocated to said second type), for the purpose of providing a more user-friendly system (col. 17, ll. 38-46).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system described in APA to include means for securing a transmission line of said first connection mode for each of said first receiving apparatus that receive the date mainly through a transmission line of said first connection mode one-to-one correspondingly and allocating the transmission lines other than said transmission lines secured for said first connection mode out of said plurality of transmission lines, as taught by Kawakami, for the purpose of providing a more user-friendly system.

APA and Kawakami fail to disclose categorizing said electronic apparatus at a predetermined timing.

In an analogous art, Fujimori discloses categorizing said electronic apparatus at a predetermined timing (upon bus reset, p. 9, ll. 37-38), for the purpose of enabling isochronous data transmission to a plurality of nodes (p. 9, ll. 22-25).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of APA and Kawakami to include categorizing said electronic apparatus at a predetermined timing, as taught by Fujimori, for the purpose of enabling isochronous data transmission to a plurality of nodes.

Regarding claims 25 and 45, APA, Kawakami, and Fujimori together discloses an information transmission system as claimed in claims 24 and 44. In addition, Kawakami discloses wherein:

a transmission line of said first connection mode is previously set to each said first receiving apparatus (broadcast channel, col. 16, ll. 24-32), and

a transmission line different from said previously set transmission line is allocated to said first transmission apparatus when the data that said first receiving apparatus cannot process is found on the previous set transmission line of said first receiving apparatus (col. 23, l. 56 - col. 24, l. 1).

Regarding claims 26 and 46, APA, Kawakami, and Fujimori together discloses an information transmission system as claimed in claims 24 and 44. In addition, Kawakami discloses wherein when the transmission line that is to be allocated to said first receiving apparatus has been already allocated to another electronic apparatus, the transmission line is regarded as exclusively occupied by another electronic apparatus, and the transmission line that is to be allocated to the first receiving apparatus is changed (col. 23, l. 56 - col. 24, l. 8).

Regarding claims 27 and 47, APA, Kawakami, and Fujimori together discloses an information transmission system as claimed in claims 26 and 46. In addition, Kawakami discloses wherein:

a transmission line of said first connection mode is previously set to each of said first receiving apparatus (broadcast channel, col. 16, ll. 24-32),

each setting information of said first receiving apparatus connected to said digital bus is referred (in the bus manager, col. 16, ll. 24-32), and when the transmission line that is to be allocated to said first receiving apparatus is exclusively occupied by another apparatus, the transmission line that is to be allocated to said first receiving apparatus is changed (col. 23, l. 56 - col. 24, l. 8).

Conclusion

4. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Lambrecht whose telephone number is (571) 272-7297. The examiner can normally be reached on 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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